

IN THE CLAIMS:

Please cancel claims 5, 6, 11 and 12, amend claims 1, 7, 22 and 23, and add new claims 25-31, in accordance with the following listing showing the status of all claims in the application.

1. (Currently Amended) A computer system, comprising:
a plurality of computer processor cores in which at least two differ in processing performance, and in which all execute the same instruction set; and
a performance measurement and transfer mechanism that moves a plurality of executing computer processing jobs amongst the plurality of computer processor cores ~~to improve~~ based on a measured throughput metric.

2. (Previously Presented) The computer system of claim 1, further comprising:
at least one of an operating system hosted on the plurality of computer processor cores, firmware, and special-purpose hardware that includes the performance measurement and transfer mechanism, and that provides for a periodic test to determine relative performance of different jobs on different ones of the computer processor cores.

3-6 (Canceled)

7. (Currently Amended) A method for operating multiple processor cores, comprising:

placing a plurality of computer processor cores on a single semiconductor die, in which at least two computer processor cores differ in processing performance, and in which all execute the same instruction set;

~~measuring performance of each of a plurality of computer processing jobs hosted amongst the plurality of~~ obtaining a throughput metric that identifies throughput achieved by the computer processor cores as a function of workloads running on said computer processor cores; and

transferring individual ones of said plurality of computer processing jobs amongst targeted ones of said plurality of computer processor cores ~~to improve a~~ based on the throughput metric.

8. (Previously Presented) The method of claim 7, further comprising:

providing for a periodic test to determine relative performance of different jobs on different ones of the computer processor cores.

9-14 (Canceled)

15. (Original) The method of claim 7, further comprising:

associating workloads for execution on specific processor cores based on at least one of user and application hints.

16. (Canceled)

17. (Previously Presented) The computer system of claim 1, further comprising at least one of an operating system hosted on the plurality of computer processor cores, firmware, and special-purpose hardware that includes the performance measurement and transfer mechanism.

18. (Previously Presented) The computer system of claim 1, wherein the performance measurement and transfer mechanism maximizes total system throughput.

19. (Previously Presented) The computer system of claim 1, wherein the performance measurement and transfer mechanism periodically transfers the executing computer processing jobs to a new assignment amongst the plurality of computer processor cores, collects performance statistics about execution at the new assignment, and then determines whether to reassign the executing computer processing jobs to different computer processor cores based on the performance statistics collected.

20. (Previously Presented) The computer system of claim 19, wherein the performance measurement and transfer mechanism swaps execution of the executing computer processing jobs between the computer processor cores for a period of time, monitoring resulting performance, and then builds a table with relative performances of jobs on different types of cores.

21. (Previously Presented) The computer system of claim 20, wherein the jobs are reassigned based on the relative performances, by assigning jobs that benefited most from large complex processor cores to said large complex processor cores.

22. (Currently Amended) The computer system of claim 19, wherein the determination of whether to reassign the jobs to different computer processor cores also is based on at least one of a user-defined metric or a workload-defined metrics metric.

23. (Currently Amended) The computer system of claim 1, wherein the measured throughput metric comprises a number of instructions per second.

24. (Previously Presented) The computer system of claim 1, wherein movement of the executing computer processing jobs is constrained to occur only at operating system time slice intervals.

25. (New) A method for operating multiple processor cores, comprising:
obtaining a throughput metric that identifies throughput achieved by computer processor cores on a single semiconductor die as a function of workloads running on said computer processor cores; and

assigning a plurality of computer processing jobs amongst the plurality of computer processor cores based on the throughput metric,

wherein at least two of the computer processor cores differ in size or complexity but execute the same instruction set.

26. (New) The method of claim 25, further comprising a step of periodically testing to determine relative performance of different jobs on different ones of the computer processor cores.

27. (New) The method of claim 25, wherein the throughput metric indicates total system throughput, and wherein the assigning maximizes the total system throughput, as indicated by the throughput metric.

28. (New) The method of claim 25, further comprising steps of periodically transferring the computer processing jobs to a new assignment amongst the plurality of computer processor cores, collecting statistics about the execution performance of the computer processing jobs at the new assignment, and then determining whether to reassign the computer processing jobs to different computer processor cores based on the performance statistics collected.

29. (New) The method of claim 28, further comprising a step of building a table with relative performances of the computer processing jobs on different types of cores based on the performance statistics collected.

30. (New) The method of claim 28, wherein the determination of whether to reassign the computer processing jobs to different computer processor cores also is based on at least one of a user-defined metric or a workload-defined metric.

31. (New) The method of claim 25, wherein the throughput metric comprises a number of instructions performed per second.